MANAGEMENT

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S.A.M. Constitution

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No "Good Theory" Is "Bad Practice"

ONE often hears such sober-sounding remarks as, "Well, that may be good in theory but it won't work in practice," or "That's too theoretical." This is loose thinking, however, and it is important that it be clearly labeled that way. The alternative is that we may come to regard theory and practice as contradictory instead of mutually necessary to each other; as a result management teams can get into violent, destructive debate.

A quick look reveals that a theory is merely a variable statement representing a process of thought which in turn represents a sequence of events. If the events are real, then these events can be arranged to occur over and over according to the theory. If they can't be so arranged, then the theory is incorrect. In other words, not a theory.

Without theory there is no management—only observation and luck. There is no such thing as a good theory being impracticable; that is, not able to be acted out as a series of foreseeable and arrangeable events.

Sometimes theory is only good "as far as it goes." This means that we do not yet have enough knowledge to include in our statement all the conditions for producing the event. Or it means that we can not foresee all the reaches to which consequence may flow. But such a theory, if stated with awareness of its qualifications and limitations, is still true and good. Within appropriate limits it may be used in action to learn more. This is called hypothesis and experimentation. Still the theory is not "too theoretical." Its value as a hypothesis for research may be the only way to deeper knowledge.

Let's use mapping or blueprinting as an illustration. The builders never say plans are "too blueprinted." The more blueprints the better. That's how they plan and build. Partnership between planner, draftsman, and builder is the essence of architectural power and progress. It would be dangerous for the "practical" builder to decide that learning to read blueprints was too much trouble since people cannot live in blueprints.

It is fatal in a modern business enterprise when the theorists and executives high-hat or ignore one another. What we need is not less theory, but more; not less experimentation, but more. Theory without practice is academic and irrelevant; practice without theory is blind, wasteful, and stagnant.

An eager and mutually respecting partnership of theorists and practitioners in every corporate function means vitality and progress and a dynamic American business system. ■

F. F. BRADSHAW

Prior to his appointment to his present Cabinet post as Secretary of Labor, Mr. Mitchell served as Assistant Secretary of the Army in charge of manpower and reserve forces affairs. During World War II, he was the Director of the Industrial Personnel Division of the War Department where he was responsible for labor and manpower problems affecting Army contractors and the administration of nearly one million civilian employees of the Army Service Forces. During the war, he served as a member of the National Building Trades Stabilization Board and also as an alternate for the Under Secretary of War on the War Manpower Commission. He has served as personnel relations advisor, Director of Industrial Relations and operating Vice President for several large industrial concerns.

JAMES P. MITCHELL

Status of Labor Relations

By James P. Mitchell
Secretary of Labor
U. S. Department of Labor
Washington, D. C.

LABOR-MANAGEMENT relations during 1955 reflected the general economic prosperity of the nation. Collective bargaining during the year was characterized by the large volume of settlements concluded, by the speed with which some of these settlements were reached, and by the size of the agreed-upon "packages" of wage and related benefits.

Not only were wage rates increased in a very high proportion of collective bargaining settlements, but most of the new contracts also liberalized supplementary benefits. The most frequent changes were in health and welfare benefits, vacation and holiday provisions, and pension plans. Supplemental unemployment benefit plans were the most publicized feature of the year's bargaining. Within a period of 4 months such plans were adopted in more than 100 agreements covering over a million workers. There was wide variation in the size of the wage increases that were negotiated, but, particularly in the second half of the year, many exceeded 10 cents an hour.

Many of the agreements specified wage increases not only for 1955 but for 1956, and in some cases, for subsequent years as well. The volume of settlements reached during the year was high partly because most of the long-term agreements, such as those in the auto and trucking industries, expired and were renegotiated during 1955. At least 2,500,000 workers are now covered by long-term agreements that specify increases to go into effect in 1956, with a substantial majority of the increases agreed to for next year, amounting to at least 6 cents an hour in manufacturing and at least 8 cents in mining, construction and transportation.

Most of the agreements with cost-of-living escalator clauses—as in the auto contracts—continued such provisions. Although the total number of wage earners covered by escalator clauses has declined since the Korean peak, little change in the total number—approximately 2,000,000 workers—was noted in 1955.

In a number of negotiations, as in the automobile industry, contract provisions relating to the union shop were —from the unions' point of view— strengthened. Labor Department studies reflected some further increases in union shop provisions with approximately two-thirds of the workers studied being covered by such clauses. Only one State —Utah—enacted so-called "right-to-work" legislation in 1955.

The level of strike activity rose in 1955 as compared with 1954 but both the number of strikes and man-days idle were below most post-war years. Although some of the major settlements were preceded by work stoppages, a number of these were very brief, with contracts being agreed to within a day of the beginning of the strike. No prolonged industry-wide stoppages occurred in 1955, although several stoppages occurred in a key industry in a major region, and much of the nonferrous industry was idled for several weeks.

The fact that the size of the 1956 wage increases has already been decided in some industries should reduce the sources of labor-management controversy in 1956. The first major negotiation of 1956 will take place in the aircraft industry. The agreement between the California Division of Lockheed and the Machinists expires in February. In the following three months, contracts expire at North American, Douglas, Convair, and Boeing.

Collective bargaining activity is expected in early summer in the shipbuilding industry; current contracts covering workers on the Pacific Coast and at New York Shipbuilding expire in June; the contract covering the Bethlehem Steel shipyards expires in July.

The Steelworkers' present two-year agreements with major steel companies end in June. On the union's bargaining agenda this year are supplemental unemployment benefits and the "full" union shop. The Steelworkers will also negotiate with Alcoa and Reynolds Metals, on agreements expiring in July.

Late summer negotiations will involve some copper agreements and the meatpacking industry. Although scheduled to expire in August, the United Mine Workers' agreement in the bituminous coal industry may be continued unless either party gives notice of termination. Dock workers on both the Atlantic and Pacific Coasts will be seeking improvements in their contracts.

During the past year both labor and management have exhibited a high degree of maturity and understanding. This is significant in view of the large number of major contracts negotiated. ■

Business management has only in this century been studied as a science. The idea of a skill of managing has only gradually emerged. Our anachronistic notions of business management are a greater challenge to our culture than Russia or Communism. "If, collectively, we can learn to be intelligent about business management, we shall have done more to solve world problems than is possible in any other way."

Management Can Be An Intelligent Occupation

By Colonel Lyndall Urwick
Chairman, Urwick, Orr and Partners
London, England

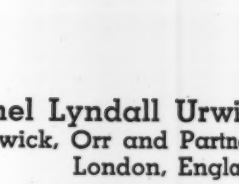
THE PHRASE which I have chosen as the title of this paper[1] is borrowed from the standard history of the British Army Staff College by A. R. Godwin Austin. This institution was founded in the early years of the last century; some of Wellington's most trusted subordinates in the Peninsular War were trained there. But the "Iron Duke", who virtually dominated both the political and the military scene in Great Britain from 1800 to the Crimean War, did not provide a climate favorable to military learning. He was, at the same time, both intensely conservative and extremely aristocratic. He believed that the essential quality required in an officer was that he should also be a "gentleman", and he feared, possibly with some foundation, that were any intellectual attainment required of officers the sons of the best families would not seek commissions.

An old friend of his who dared to experiment with garrison schools incurred his unmeasured wrath. He was ordered to shut down the obnoxious novelty immediately. The Duke added the characteristic comment, "By God, Sir, if we have a mutiny in the Army, and in all probability we shall have one, you'll see that these new-fangled schoolmasters are at the bottom of it!"

Thus, through the first half century of its existence, the only national center in Great Britain for the study of the theory of war was not encouraged. Less than 10 percent of the officers who qualified there secured staff appointments. It was commonly regarded among the great body of officers as a rather shady "refuge for married officers who wished to avoid service abroad and for unmarried officers whose only aim was to shirk regimental duty." As a consequence, Great Britain entered on the Crimean War with an army "completely ignorant of any system of transport, supply or medical service: no ancillary units even existed." Of some 300 generals on the active list, seven were less than 58 years old and over 50 were more than 78 years old. The operative word is "active."

As late as 1860 it was not easy to persuade the regimental officer to take professional training seriously. His appetite for education was extremely delicate. So venerable a tradition takes a lot of living down.

Today we are facing, if not quite in this extreme form, something of the same attitude with regard to business management. The study of how man should govern his systems of cooperation is, of course, as old as recorded history. From Lu, the Chinese philosopher, then to Plato, through Machiavelli's "Prince", down to Hobbs and Locke, this study has been accepted "discipline", usually described as "po-



COLONEL LYNDALL URWICK

COLONEL LYNDALL F. URWICK, Chairman of the British consulting firm of Urwick, Orr and Partners, won worldwide reputation as Director of the International Management Institute during 1928-1933. Since that time he has served as Vice-chairman of the British Management Council and as an active member of the International Committee of Scientific Management. His books include **The Meaning of Rationalization**, 1929; **Management of Tomorrow**, 1933; **Papers on the Science of Administration** (with L. Gulick), 1937; **Elements of Administration**, 1944; **The Making of Scientific Management** (with E. F. L. Brecht), 1948; and **The Golden Book of Management**, 1955. He holds the Gold Medal of the Comité International de l'Organisation Scientifique, and the Wallace Clark International Management Award.

[1] *A lecture at Columbia University sponsored by the Graduate School of Business and the Department of Industrial Engineering, prepared for Advanced Management by Professor William H. Newman, Graduate School of Business, Columbia University.*

litical science." But it is only within the present century that the idea of a similar study applied to the government of business undertakings has begun to make headway. Indeed it is only even more recently that the fact that a business undertaking, a corporation, is a social group, a little society within the larger framework of state and nation, has been explicitly recognized at all.

CULTURAL LAG

In business, up to the beginning of the present century, the art of management or of business government, was regarded, almost universally, as a mere addendum to the technical "know how" of making some specific product. A man was regarded primarily as a manufacturer of bacon or boots, not as a manager, an executive. The idea of a discrete skill of managing had not emerged.

Yet, at that date, the Industrial Revolution which had professedly altered the whole of the conditions under which business operated had been under way for over a century. It had led to vast aggregations of men, machines and equipment under a single control, aggregations which certainly called for great skill in ordering their affairs. But men persisted in thinking about this entirely new situation in terms of the handicraft economy which had preceded it. They regarded the employer or manager of the nineteenth century not as a person who was doing something entirely new, but rather as though he were an extension of the master-craftsman of the seventeenth century.

This is merely a special case of a universal human limitation, the inability at first to think of any new departure, any fresh facility, except in terms of the situation or the methods which it has displaced. Systems of transportation provide a series of examples. Observe the early railway carriage in the hall of Grand Central Station in New York, a slavish copy of the coachwork of a stage coach mounted on bogies. I once saw an early automobile chassis in the museum at Dusseldorf: on top of it was the body of a four-wheeled dogcart complete with whipstock. Our very language betrays us. We are still almost incapable of talking about the air except in terms derived from land or water transport. Yet the change in our potentialities differs as much as does a Christmas cracker from dynamite.

When it comes to social habits and customs, the folkways out of which we build our institutions, the time-lag is far worse. There is nothing concrete to illuminate our clouded vision or to stir the sluggard imagination. We are always fighting tomorrow's battle with the weapons of the last war. And those who are presumptuous enough to try to see round the next corner, socially speaking, are almost invariably execrated. They are fortunate if they escape the fate of Galileo who was done to death for daring to assert that the world is round and not flat.

It was recognition of this fact that led Thorstein Veblen to write his sombre prophecy in, and note the date, the early months of 1914:

> "History records more frequent and more spectacular instances of the triumph of imbecile institutions over life and culture, than of peoples who have, by the force of instinctive insight, saved themselves alive out of a desperately precarious institutional situation, such for instance, as now faces the peoples of Christendom."

Later thinkers have said much the same thing. Elton Mayo, in his *Social Problems of an Industrial Civilization*, declared flatly, "Had our social skills advanced step by step with our technical skills, there would not have been another European War." The "imbecile institutions" which were foremost in Thorstein Veblen's mind were business undertakings. The place where Mayo had the greatest opportunity to observe our lack of social skills was in industrial plants.

THE REAL CHALLENGE

We have moved in less than two centuries into a completely changed environment dependent not on manual skill and the natural powers of wind and water, but on mental skill, our unprecedented control over material things leading to created power—of steam first, then of electricity, now of atomic energy.

Russia is not our danger. The menace from the East has been rolled back from Vienna and Spain—the ancient gate houses of Christendom—before. Communism is not our greatest peril. It is not the first time in the history of mankind that a new fanaticism, a new creed of force, has beaten up against the older landmarks. The only enemy we need to fear is the enemy within us, this time-lag in man's power to adapt his mind—and that means his social and political ideas, his institutions—to the changed environment created by a new material culture.

If we, in the Western democracies fail to make that adjustment in time, to improve our social skills and the make-up of our institutions, so that the masses of our peoples are reasonably satisfied with the societies—larger and smaller—in which they live and move and have their being, indeed we shall have cause to fear.

VITAL PLACE OF BUSINESS

And the heart of that problem is found in our business institutions. Because it is on them that the new material culture of a mechanized economy, an economy of power-driven machinery, strikes most directly and most forcibly. It is in them and through them that the great majority of the Western peoples earn their daily bread. It is they, therefore, who have most to say as to where people live and how they live. If they are not tolerable societies, no political or other action of which we can conceive will make any difference. On the quality of their government, as social units, depends everything else. It is comparatively immaterial who owns them or how their surpluses are distributed.

The central point is that the way in which business firms are managed should accord with reality, be in tune with the postulates that machine-using creates, and that those who work in them should understand and accept those postulates. If we persist in attempting to govern them—if those who work in them persist in thinking about them in obsolete terms, so that their ideas are like the whipstock on the automobile, anachronisms, inappropriate relics from a handicraft age—then we shall deserve even the fate that will surely overtake us.

I have said so much to emphasize that this subject of business management is not merely a nice little isolated technique, which may help some people to earn a better salary in the future, but which has little to do with the wider world problems which fill the headlines. Far from it. It is the core of the difficulties which make the headlines. And if, collectively, we can really learn to be intelligent about it we shall have done more to solve world problems than is possible in any other way.

The first break in the stolid persistence of handicraft ideas on the subject

came just about half a century ago with the work of a small group of engineers in this country of whom Frederick Winslow Taylor, Henry Lawrence Gantt and Frank Bunker Gilbreth were the most distinguished. Like all great ideas, the idea of treating the government of business as an intelligent occupation, a subject about which an organized body of knowledge was possible, an activity which could be analyzed and measured and thought about on scientific lines, did not spring ready-made from the brain of any one man, an isolated invention. It was an evolution, the gradual precipitation into a coherent pattern of all kinds of efforts and thoughts that had hitherto been merely fragmentary.

BREAK WITH TRADITION

Throughout the nineteenth century the technical side of an industrial plant and the commercial side had tended to live in watertight and often warring departments. In 1881 H. R. Towne in a paper to the A.S.M.E. entitled "The Engineer as an Economist" told his engineering colleagues that it was their duty to interest themselves in the commercial aspects of the institutions which employed them. They must come down out of their ivory towers of technical isolationism. They even began to talk to the commercial boys. In England an engineer and an accountant wrote a book together; Montague and Capulet had had a baby.

About the same date a few engineers became interested in the paperwork of the plants which employed them. A man called Leclin Smith wrote a paper entitled "The Nomenclature of Machine Details". Captain Henry at the Frankford Research worked out a complete system of job order forms, returns and so on and wrote a book describing it.

A little later the engineers became interested in wage-payment systems and the labor problem in general. An early wave of experiments with profit-sharing had shown a high rate of casualties. Towne, Halsey, Gantt and others were looking for an alternative which would prove a real stimulus to production by relating the worker's share of the surplus more directly to his daily output.

Onto this confused picture was imposed the genius—and I use the word without doubt or reserve—of Frederick Winslow Taylor and the high ability of Gantt and the Gilbreths. What Taylor did was what every chief executive has to do in industrial government. He picked up this scatter of disassociated and specialized ideas and movements of thought, added a great many of his own, and gave to the whole an underlying philosophy, a unity and a focus, which had hitherto been lacking.

He was the first man to think of the government of anything in terms consonant with the technical imperatives of a power-driven machine economy. And it was this intellectual unification which he accomplished, this work of integration, which was his greatest gift to this country and to the world—greater even than his own fertile inventiveness, though that was more than enough for one lifetime.

Many of Taylor's followers and admirers decided after his death to found a priesthood, and it is the way of priesthoods to emphasize the letter of the law at the expense of the spirit. They mistook his practice, his methods, for his philosophy, and even went witch-hunting after people whose approach to the problem differed in matters of detail. This was exactly contrary to Taylor's expressed convictions. He said categorically, "Scientific Management is not any efficiency device, nor is it any bunch or group of efficiency devices. . . ."

What he did claim was that management was something more than an empirical craft which could only be picked up by the way as a man was learning to make boots or blankets. He felt that there was a vast fund of experience and knowledge knocking about the world as to good and bad ways of trying to solve management problems. This knowledge could be recorded and systematized, it could be taught. Some aspects of it could be measured and submitted to the scientific methodology of experiment and proof.

And this is what Taylor had in mind when he said, "Management is destined to become more of an art." By an art he meant an activity like medicine or the law, in which the practitioner would need fundamental, intellectual training as well as practical experience. It would cease to be a mere craft to be acquired by apprenticeship only like cobbling or hedging.

In the same year Taylor died (1915), Henri Fayol, a great French industrialist, published his "Administration Industrielle et Generale." Like Taylor, a man of fundamental scientific training, he had been for thirty years the fantastically successful chief executive of a large combine of coal mines and metallurgical plants. But he attributed his success, not to any personal qualities, but to the application of certain basic principles, which, he claimed, could be taught.

His little book—it is only just over 100 pages—is an analysis of the job of a chief executive carried through with the same objectivity, the same careful respect for scientific method, which Taylor had applied to the work of the lathe hand. The two men were dealing respectively with the top and the bottom of the business hierarchy, but their work is essentially complementary.

Of course, the chief executive's activities are not easy to measure except in terms of the profit and loss account. I have yet to meet the president who would welcome stop-watch studies of his activities (which makes me slow to be critical when workers object to time-study). "The Colonel's lady and Judy O'Grady are women under their skins." Chief executives and workers on the shop floor are also of the same clay.

THE INTELLIGENT APPROACH

Since Taylor's death, his method of attacking management problems along scientific lines has been extended to every function of industry and to every variety of business undertaking. But it is perhaps in the two fields to which he

CHAPTER PERFORMANCE AWARDS REPORT

July 1, 1955-November 30, 1955

Providence	4958	Clearing	2694
Knoxville	4561	Lehigh Valley	2678
Hudson Valley	4485	Sacramento	2654
Lancaster	4466	Alabama	2650
Bridgeport	4274	Dallas	2578
New Haven	4145	Los Angeles	2335
Wilmington	4027	New Orleans	2335
Greensboro	4012	Worcester	2308
Indianapolis	3911	Montreal	2070
Cleveland	3888	New York	2064
Western N. C.	3863	Portland	1724
Boston	3852	Baltimore	1696
Raritan Valley	3819	Central Pa.	1423
Chicago	3767	Central N. Y.	1312
Nashville	3732	San Francisco	1194
Philadelphia	3666	Madison	882
Washington	3647	Western Mass.	863
Binghamton	3473	Detroit	624
Columbus	3448	Georgia	546
Pittsburgh	3423	Athens	
Northern N. J.	3389	Calumet	
Greenville	3363	Charlotte	
Tren.-Del. Val.	3241	Cincinnati	
Northeast. Pa.	3191	Dayton	
Saint Louis	3096	Fox Valley	
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directed less attention—namely, the dynamics of administration and the work of higher management—that the most distinguished and original thinking has been done. Under the first head I would pick out the work of Walter Dill Scott, Mary Parker Follett and Elton Mayo. Under the second, it appears to me that Messrs. Mooney and Reiley in their first study of comparative organization, "Onward Industry", broke entirely new ground.[2] Chester Barnard's "The Functions of the Executive" is another highly significant contribution to the portion of the field first tilled by Fayol.

As to Taylor's contention in 1897 that management could and should be taught, there was at that time one school of business administration of university standing in the United States. Today, some 697 institutions are giving degrees in this field which are attended by over 370,000 students of the subject.

ROLE OF MANAGEMENT THEORY

Management is an art, but it is an art which can be practiced in the scientific temper and spirit. The so-called "practical man" is very apt to rail at "theory", particularly in countries of Anglo-Saxon origin. He forgets two things. First, that practice is static. As a doctor wrote in Great Britain some years ago, "to theory, sooner or later, the subtlest craftsman has to bow his head; for, even while his hand is on his tools, by theory contingencies and complications are being detected and eliminated and processes shortened and economized." As a consequence in the birth of any new concept the "practical man's" part is the woman's part. It is true that every new idea, every theory, has to be nurtured in the womb of practice, before it comes to a full life of its own—a truth in the solid. But without the germinating influence of theory there would be no new life at all.

Management is an intelligent occupation. It can and must be treated as such if our present civilization is to survive. ■

[2] *I am sure Mr. Mooney will forgive me for adding that the subsequent shorter versions seem to me the one exception I know to the general rule that a short book is better than a long one. They lack the wealth of illustration from different forms of organization which make the first volume so stimulating and original.*

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At work we spend a great share of our time talking, listening, reading, writing and conferring. This article reviews all of the significant types of the total communication process in companies, indicates the common barriers which impede it, and states the ways in which each type of communication can be carried on more effectively.* A ten point organization check list on communications is given to guide the evaluation of these skills in any company.

How Effective Are Your Company Communications?

By Harold P. Zelko

Professor of Speech
Pennsylvania State University
University Park, Pennsylvania

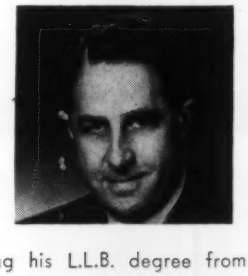
THIS IS AN AGE OF COMMUNICATION, even more so in industry than in other walks of life. When we realize that we were just beginning to feel the importance of communication in industry only about a decade ago, the stage it has reached today is quite remarkable. The fact that it has become so significant is not attributable to industry alone. It stems in part from a growing realization that all peoples of the world are being brought closer together, and in turn we are in much closer touch with each other in everything we do. The average man today is not only closer to his foreign neighbors. He is closer to his government and to the social and economic affairs of the day. He feels the same urge to be closer to his company, the place where he works, and the people with whom he works. And he knows there is no other medium that accomplishes this objective more than communications. We all want to feel that we are a part of a social and democratic scene, whether we are just mixing with friends, attending a meeting, observing our government, running a machine, or directing the work of others in a factory.

Business, industry, and government have therefore felt the need to establish better communication channels and mediums throughout their organizations, and a great many steps have been taken. In its concern for people and a recognition of their value to the organization as individuals, industrial management has recognized the part that communication plays in promoting teamwork, cooperation, and opportunities for participation so essential to both individuals and to the company.

There is manifold evidence of this. The management journals are running more articles on communication than perhaps any other single subjects. Conferences and workshops are being held on the subject by major groups such as The Society for Advancement of Management, The American Management Association, and The National Association of Manufacturers. Research studies and surveys have been made by these organizations and others, such as the National Industrial Conference Board and leading universities. Workshops and short training conferences are held annually by universities including The Pennsylvania State University, Ohio State University, Kent State University, and the University of Minnesota. Companies too numerous to mention have issued company policy statements on communication, with such leading examples as Johnson & Johnson, General Electric, United States Steel, and Detroit Edison. They have gone beyond this to set up Communication Departments and Directors of Communication, and there is an increasing amount of training being done in the communication skills.

The broad basis for communication in an organization is the recognition of the work scene as a significant part of today's living and therefore as a socially democratic environment. Translated in-

HAROLD P. ZELKO



After receiving his L.L.B. degree from Ohio State University and practicing law for three years, Harold Zelko turned to speech and communication as such. He has had twenty years' experience as professor of speech at Pennsylvania State University, as consultant on management and communication, and on leave as director of training for the Army Corps of Engineers, the Office of Price Stabilization, and the Internal Revenue Service. He has lectured and conducted workshops on communications for many business and government organizations.

*This article is a partial digest of the book "Management Communication in Action" which Mr. Zelko is writing in collaboration with Dr. Harold J. O'Brien of the Penn State staff.

to the more specific ways in which communication operates and has its effects in a company, the goals are better industrial relations and employee morale. The ultimate goals are of course better production through greater worker satisfaction and recognition. Still more specifically in terms of what is required from communications is that people be *informed*, that they be *drawn on and asked* to contribute their judgments, and that they be given opportunities to *participate*. The first of these objectives is given weight by most communication planners and theorists. It is important to keep people informed, and from the standpoint of the sheer need for knowing certain things in order to know how to do the job, it is vital. But the mistake in communication planning is to conclude that informing people is the only objective of the communication system.

ORAL COMMUNICATIONS BASIC

The average man wants to feel that he is recognized as an individual, and there is no better way to do this than to ask him his advice and draw on him to contribute toward making decisions. It would be anarchy, of course, to try to do this with every management decision. But this is where management must be judicious and understanding, must keep in mind both "company interest" and "employee interest" in trying to decide on what matters employees can be drawn on for advice and counsel and on what matters management alone can decide. But as we recognize that company interest is employee interest, progressive management is drawing on its employee reservoir of experience and judgment more and more to help it solve problems. The goal of *participation* is thus accomplished to the fullest. This is also the reason why oral communication has achieved major emphasis. If the goal were only to keep people informed, this could be accomplished in most instances through the written medium. But you can't get people's reactions by having them read a printed page. You have to give them the opportunity to ask questions, make comments, contribute judgments, and talk things over. There is no substitute for the oral, face-to-face relationship in accomplishing these goals.

Organizational communication is concerned with all relationships of the company as a whole in relation to each individual, in relation to the public, and with each individual in relation to other individuals. We therefore have these *three major areas of the total process*:

1. Internal organizational communication
2. External organizational communication
3. Interpersonal communication

Internal organizational communication involves the complete program of communications policy, planning, channels, and mediums. Planning for the best possible communications in an organization is a top management responsibility initially, and it is a continuing responsibility of all levels of management. The objective is communication DOWN, UP, AND ACROSS the organization and the determination of the best policies, channels, and mediums for accomplishing the objective. The organizational structure itself creates problems of size, distance, levels of authority and others which affect communications. A great deal of thought is being given to the structure that will best facilitate the communication objectives, with the trend toward fewer levels of supervision and more "consultative management" which pulls the organization closer together.

SOURCE OF PUBLIC RELATIONS

External organizational communication is commonly known as "public relations," but it is a mistake to regard this as something tacked on externally to the company's operations. *Public relations is a part of the total communication system of a company.* Good public relations starts from within and is dependent on a healthy internal communications program and climate. Public relations is the representation of the organization as a whole, or of the product or people who work for it, to the public. Too many organizations think that this is simply a matter of what the Public Relations Department or the Advertising Department prepares and releases for "the company" for public consumption. Actually every employee represents the company to the public whether he is at or away from the work scene. Supervisor A, salesgirl B, salesman C, repairman D, and company president P have all sorts of opportunities to put the company's best foot forward. It is well to remember that any employee's contact with the public is only as good as the sense of belonging to the organization which he feels. And this comes back to the question whether he has been informed, drawn upon, and allowed to participate through good internal communications.

EXCHANGE OF IDEAS

Interpersonal communication is the heart of the total communication system of an organization. Every objective, policy, and program aimed at the broad purpose of improving the total communication process must ultimately result in the exchange of ideas between people. Usually this can be reduced to the exchange between just two people, and the most common occurrence is between supervisor and worker. We have already pointed out the emphasis on oral communication in the total process. Estimates are that 75% of the total communications time is on the oral medium (30% speaking, 45% listening) and 25% is on the written or printed medium (9% writing, 16% reading). The interpersonal communications process looks simple, but it is exceedingly complex. We have used the term "exchange of ideas" rather than "transmitting ideas" to emphasize the fact that it is a *two-way process.* There is as much to the receiving, or listening, end as to the speaking end. Actually as the listener reacts and thus influences the speaker and the thoughts he is communicating, the process becomes a *circular* one, in which both speaker and listener influence each other. We therefore see that the skill of listening is as much a part of the total process as the skill of speaking.

We must also remember that all communication takes place in a given *situation*, never in a vacuum. This means that good communication demands careful attention to and analysis of the situation which includes both the physical or environmental surroundings and the person at the other end. At the same time, the biggest problem to effective interpersonal communication is that it always takes place with certain *barriers* operative. A thorough understanding of the barriers and an effort to resolve them in any given case is essential to good communication. Both the situation and the barriers are constantly bombarding the communications line and trying to dent it or distort it. Any attempt to put the complexities of this analysis into brief perspective is of course hazardous, but Figure 1 shows a list of the barriers and what

Figure 1. Resolution of Communication Barriers

Speaker should:	Barriers to Communication:	Listener should:
Speak at level of listener status, interest, experience.	Status & position. Self experience.	Think in terms of speaker's status, interest, experience.
Adapt to listener prejudices.	Prejudices.	Dispel prejudices.
Use common ground and "You" attitude.	"I" vs. "You" attitude.	Develop "You" attitude.
Make changes seem attractive.	Resistance to change.	Be open-minded.
Organize clearly for understanding.	Refute rather than understand.	Listen to understand.
Develop for listener interest.	Extra listening time.	Use listening time constructively.
Use listener level language.	Language.	Analyse speaker's language.

speaker and listener can do to try to resolve them.

Most of the *barriers to interpersonal communication* stem from the fact that speaker and listener are from different backgrounds and experiences and are frequently on different levels of status and position. The obviously most simple solution is for each to assume the level of the other, and the closer both approach this, the better they will understand each other. But individuals tend to be self-centered, prejudiced for their own feelings and beliefs, and speak and listen from an "I" rather than a "You" (other person) attitude. We also tend to resist changes and therefore find reasons against what we are hearing as we listen, rather than try to understand. In addition, we are able to think about four times as fast as we can speak, meaning that the listener can "absorb" what he hears in about one-fourth the time needed by the speaker. Unless we use this listening time constructively to try to understand the speaker, we daydream and allow all kinds of outside thoughts to enter our minds.

SELECTION OF LANGUAGE

The *language barrier* comes to the mind of most people as the chief obstacle to communication. This is so only in that language is the symbolic tool or form given to the communication and is what is heard or read. Actually all the other barriers are responsible for the speaker's final choice of language and they are thus the real barriers. But any attempt to improve communication, either on the speaking (writing) or listening (reading) end, must include a consideration of principles and methods for improving language facility. Proper selection of language to express thought depends on factors such as:

1. Understanding and knowledge of the subject.
2. Analysis of subject for main ideas, issues, pros and cons.
3. Analysis of listener for status, position, attitudes, prejudices, present knowledge and understanding.
4. Clear and logical reasoning and "proof" of ideas.
5. Broad vocabulary.

Using words most accurately to convey thought involves the factors just listed as well as certain principles and proceses which are somewhat semantically oriented, including these:

1. The process of *Abstracting* which is identifying the object or idea with a proper word by arriving at a suitable general term which will exclude characteristics in order to make the term sufficiently inclusive to convey the meaning intended.
2. The process of *Classification* which will sufficiently distinguish the object or idea from others that might be similar.
3. The principle of *Extension* which is looking beyond and outside the object or idea to ascertain as much factual information as possible in order to properly identify or describe or see meaning in the object or idea.
4. The principle of *Intension* which tends to draw us to the first word or words that occur from the object or idea itself, i.e. what is connoted within the thing itself and within our present knowledge and experience.

In developing the total communication program in an organization, it should be obvious that one of the principal objectives should be to develop the communication skills of all persons responsible for communicating. We roughly divide these into oral and written skills, but a more complete list of the skills most frequently used, and the major mediums, is given in Figure 2.

MANY SKILLS REQUIRED

Skill in interpersonal relations involves a combination of understanding of people, human relations, and effective speaking and listening. These should include a sympathetic attitude and a sincere desire to make contacts with other people on the job, both subordinates and persons on the same level. A planned effort must be made to give workers an opportunity to express themselves informally and in more formal interviews. Thinking and speaking must be in terms of the other person. Argument and conflict must be avoided in favor of tact and conciliation. This means giving the other fellow some credit for what he has said. Space does not permit an elaboration of these principles, although all the principles and suggestions following under speaking and listening would be applicable, as well as those discussed above.

Skill in effective speaking comes into the picture in all our oral communication relations with others. The principles are applicable to situations where we are to talk to groups as well as in conversation in informal contacts. It is a mistake to regard training in effective speaking as confined to learning

Figure 2. The Communication Skills

Major Skills	Major Mediums
Speaking in interpersonal relations.	Informal personal contacts.
Speaking to groups.	Talks to groups.
Listening.	Counseling interviews.
Leading and participating in conferences.	Conferences and meetings.
Interviewing.	Orders and instructions.
Writing.	Letters and memorandums.
Reading.	Manuals, handbooks, newsletters, bulletin boards, suggestion system.

"how to make a speech" to a group. There is perhaps no training that comes closer to the *full* development of the *total person* in all his relations with others than training in speaking.

Speaking effectively involves what you say and how you say it to a specific listener. In putting together your thoughts (what you say) in the most effective manner and communicating them (how you say it) with a specific listener or situation in mind, the steps in Figure 3 should be followed for a systematic approach to effective speaking.

Skill in listening has been discussed above, with the major suggestions pointed out in relation to the barriers of communication. The important thing to remember in developing listening skill is that *listening is an active,* not a passive, part of the communication process. It is a primary management tool in that it is the fundamental medium by which management can *draw on* and use the experience, knowledge, and abilities of the work group. It is a primary tool for better human relations in that there is no better way to gain the respect and understanding of the other person than to listen to him. It is basic to one's own self-development in that the better one listens the more he will learn and absorb from his contacts with other people.

Figure 3. Steps Toward Effective Speaking

Planning — to determine your purpose, subject, main ideas . . . in relation to the listener.

Organizing—to develop a coherent plan, in outline form, of the structure and and continuity of your thoughts.

Developing — to use proper reasoning, proof, and supporting tools to clarify, prove, and make ideas attractive to the listener, and to best hold listener interest and attention.

Motivating — to best appeal to listener basic drives and motives so that he will be moved in his thinking and feeling in the direction of your purpose and ideas.

Communicating—to use the best symbols of language, words, actions, and movement that will best communicate your ideas to the listener. We are striving here for naturalness of manner, or extemporaneous speaking as distinguished from oratory. Communication should be direct, sincere, animated, enthusiastic, from notes or outline rather than read from manuscript.

Skill in leading and participating in conferences might be listed as the major medium for the organized use of the oral communication medium in many organizations. The average executive spends from 25% to 50% of his time in conferences. They are frequently the most effective medium for accomplishing the total communication objectives at one time: to keep people informed, to draw on them for judgment and information, and to give a feeling of participation. Sitting around a table, rubbing elbows with fellow-employees, and exchanging ideas develops a team spirit and a feeling of group solidarity rarely achieved through other mediums of communication. A system of regularly scheduled conferences at all levels in the company is one of the best and most effective parts of organizational planning for better communications. Here are some basic roads to better conferences:

1. *Understanding the Types* of conferences.
   - Conferences may be (more frequently are) problem-solving or policy-making and be largely group-controlled.
   - Conferences may be for informing or instructing and be largely leader-controlled.
   - Determining the type or objective leads to better establishing the leader-group relationship.
2. *Proper Planning*, including the

100th Anniversary

Frederick Winslow Taylor

The Editor
Advanced Management

Tuesday, March 20, 1956 will be the 100th anniversary of the birth of Frederick Winslow Taylor, the so-called "Father of Scientific Management."

This anniversary will be celebrated in France by the publication of a new biography of Taylor by Hyacinthe Dubreuil, author of "A Chance for Everybody" and "Work and Civilization," emphasizing the philosophic aspects of Taylor's work rather than the episodic, as is so largely true in Copey's life of Taylor.

It would seem appropriate that some of the agencies and individuals heretofore interested in developing Taylor's ideas and practices for the benefit of the public may want to utilize this anniversary in some way—as by talks, papers or meetings—for the further spreading of his influence, which has long since been widespread in industrial production and human relations at home and abroad.

Morris Llewellyn Cooke

St. Georges Road
Philadelphia 19, Pa.

agenda, notice to participants, facilities, and an outline.

3. *Good Leadership*
   - Being group-centered.
   - Keeping discussion active and organized.
   - Using questions, cases, handouts, blackboards, charts, role-playing, and other tools.
   - Being a good listener.
   - Making good opening and closing remarks, with clear transitions and summaries.
4. *Good Participation*, when a group member, including open-mindedness, preparation, listening, speaking actively, pleasantly, briefly, and with tact and conciliation.

Skill in interviewing involves all the skills of interpersonal relations, effective speaking and listening, and conference, with emphasis on the ability to analyse and adapt to the other person. Interviews are planned two-person conferences, usually to discuss or solve a problem or handle a situation. The basic use of the interview in management is to handle a grievance or problem, or to counsel with an employee. Most interviews follow a pattern which is similar to the pattern of conference problem-solving and reflective thinking.

The major elements in the interview pattern are given in Figure 4. Some principles for conducting the interview include drawing out the other person as much as possible; refraining from direct or interpretative comment in favor of "non-directive" method of letting the other person talk and make interpretations; trying to keep some pattern of organization; being a good listener; and observing and analysing the other person.

Figure 4. The Interview Pattern

Attention drawn and focused on situation or problem, after opening to establish common ground and "permissive" atmosphere.

Problem analyzed in terms of facts, history, significance, who, what, where, why, when, how.

Possible Solutions considered and weighed.

Solution reached and tested.

Action mapped out and agreed on for future.

Skill in effective writing comes from using most of the principles we have already talked about in the oral communication skills. Good writing is tending to utilize more and more of the

NATIONAL MEETING DATES
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April 28, 1956.....Board of Directors
June 22, 1956.....Executive Committee
June 23, 1956.....Board of Directors

principles of informality, personal approach, short sentences, personal pronouns, and other features adding up to informality. Principles of planning, organizing, developing, motivating, and adaptation to the reader are all applicable. The writer does not himself "deliver" the message, however, and it must be understood entirely by the reader without his help. These principles should be kept in mind:

1. The traditional rules of unity, coherence, emphasis
2. Understanding of sentence and paragraph structure
3. Brevity and conciseness
4. Interestingness
5. Reader appeal and motivation
6. Grammar and correct usage

Skill in reading is recognized as essential to higher levels of management particularly, and a great deal of emphasis is being placed on the improvement of this skill. In the total communication of an organization, reading for better understanding is of greatest importance. We also want to improve our rate of reading and our ability to retain what we read. The average adult reads at a rate of about 200 to 250 WPM, with variations from 100 to 800. The ability to read depends on vocabulary (the average college student's vocabulary is about 50,000 words which grows up to 300,000 words as he matures), complexity of the material, and ability to understand and interpret. The reading process involves the *span of recognition* or word groups across the page, *fixations* or pauses (most people make too many), and *regressions* (going back over word groups). Reading training tries to broaden the span and cut down on the number of fixations and regressions. Other suggestions for developing reading skill are to develop a larger vocabulary; survey the material generally first, noting headings, topics, and main ideas; underline and take notes (if understanding is the chief goal); relate what is read to your own experiences and interests.

Training in reading skill involves the use of the reading accelerator to develop rapid eye movement, less regression, and better word groupings; and the tachistoscope to widen the perceptual span.

Communication is a basic part of the management and operation of a business organization. It is not a frill or something tacked on or occasionally engaged in just to be "in style." It is based on the concept of considering all employees as belonging to a socially democratic work group, requiring that they be informed, drawn on, and given opportunities to participate. It requires a carefully worked out plan, a continuing attention to communication needs, and the development of communication skills in all those who have responsibilities to communicate. Figure 5 shows a ten point organization check list on communication. Training in communication skills should be given, particularly to key employees. Management should itself grasp and instill in others that communication involves the internal, external, and interpersonal relations of the company and the people in it. Greater use of the oral medium should be encouraged, as well as greater understanding and resolving of barriers. Finally, we should remember that communication is a complex total process, requiring constant analysis; and there are no short-cuts. ∎

Figure 5. Organization Check List

1. Have we developed an understanding of the **place** and **importance** of communication in our organization?
2. Do we consider communication as a **total process?**
3. Have we located the **channels** to be used
4. Have we determined the best **mediums** and **methods?**
5. Do we recognize and try to **resolve the barriers?**
6. Do we have a **communications policy?** (In writing?)
7. Have we developed a **climate** for communications?
8. Do we include **planning for communications** in all management plans and decisions?
9. Do we allow **time** for communicating to all employees?
10. Are we trying to **locate** and **train all key communicators?**

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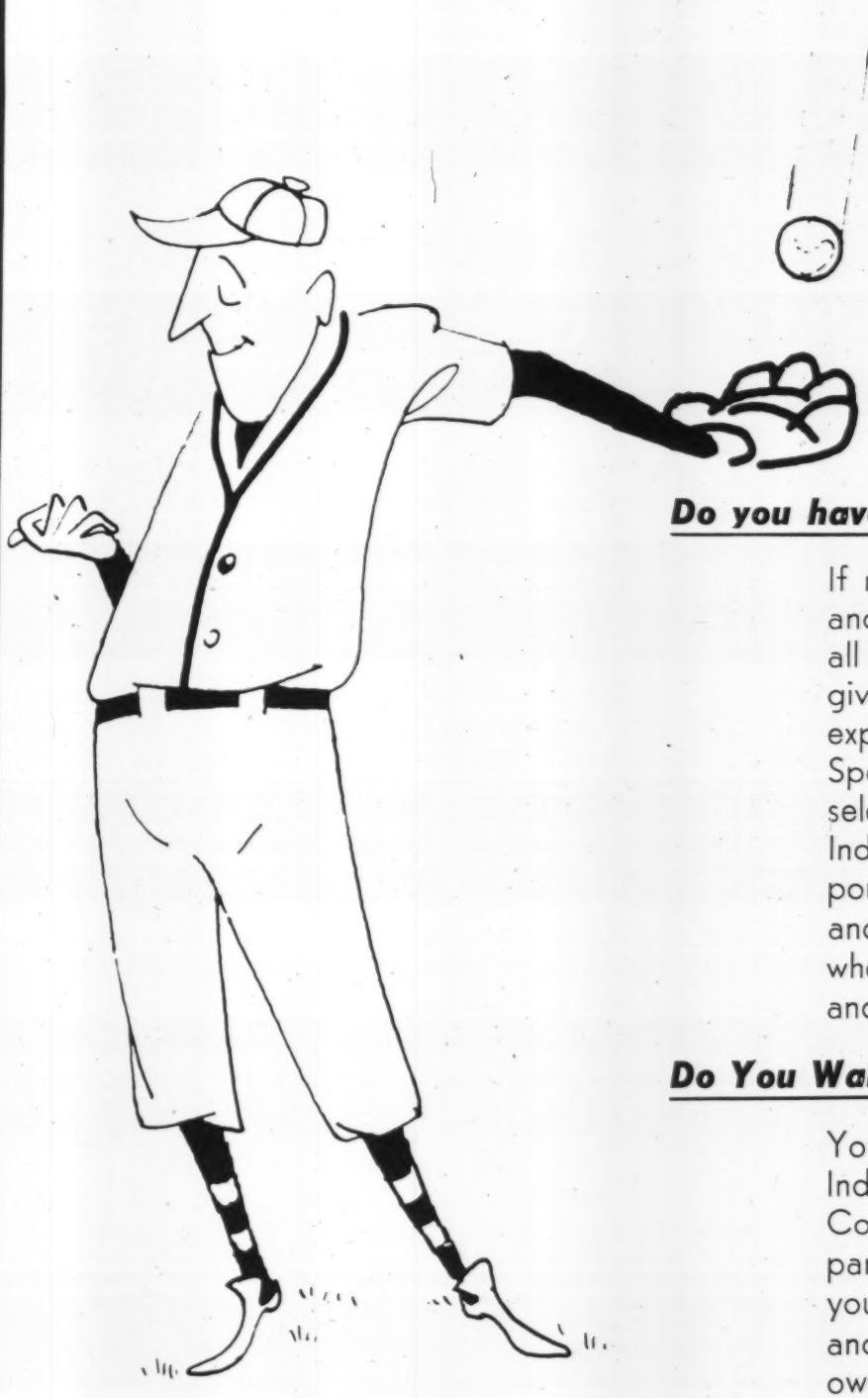

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Is a hurricane of protests forming about abuses of personnel testing in business and industry? The co-author of one of the most widely used tests, the Humm-Wadsworth Temperament Scale, takes stock of the major objections to personnel testing, pointing out that tests must first be scientifically validated and then administered and interpreted only by those with an adequate technical background. The steps in validating tests and the requirements for successful personnel appraisal are also discussed.

An Appraisal Of Personnel Testing

By Doncaster G. Humm
Director
Humm Personnel Consultants
Los Angeles, California

UNQUESTIONABLY the standardized personnel test is big business. One test alone, Bernreuter's Personality Inventory, is reported to be selling at the rate of more than 1,000,000 copies a year; and there are more than a thousand different tests published. Probably three-fourths of business and industrial corporations are using these tests in the selection and upgrading of employees.

This practice poses both a personnel and a personal problem. It seems time to take stock.

Is personnel testing effective or is it a practice which is unfair both to the firm and to the worker? Unfortunately the answer is both yes and no. Let me illustrate, first by example, then by some summaries.

In August of 1950 a young man walked into our office with a letter of introduction from Washington, D. C. He was a recently released brain-truster looking for a job in personnel. On the basis of the results of a battery of tests we recommended him for personnel manager to one of our clients. Since then he has built up by tests, verified by personal histories, a sales force which, starting from scratch, has captured over 25% of the sales of a nationally distributed product.

On the other hand, in 1944 we discovered that a personal friend had been for a number of years tagged as having only mediocre intelligence because of the result of a short paper-and-pencil test of intelligence given him in a company survey. This had resulted in his being passed over several times when promotions were being considered.

I said to my assistant, "If Jake has an average IQ, then I don't know a bright man when I see him. Let's find out what IQ he really has."

We tested him carefully and determined without doubt that he had very superior intelligence. On our advice he changed jobs. Now he is enjoying a five-figure salary. If no one had taken the trouble to challenge that tag of mediocrity, he might still be in a low bracket clerical job.

Now for three summaries:

A psychologist serving as personnel director for a large electrical manufacturing company reports, "In the study of 129 men in supervisory training, in only seven cases (95% batting average) did we fail by the use of tests to predict success or failure."

Another personnel manager found that his testing program had reduced problem employees from 29.0% to 5.5% in two groups of about 500, one selected by tests, the other by interview only.

On the other hand, a college psychologist in attempting to select salesmen by use of tests reported that only eight out of twenty he deemed good risks made good; while four out of twelve he rated unemployable were promoted.

There you have it *yes* and there you have it *no*. What's the explanation?

It is quite simple. Testing intangibles in such fields as intelligence, skill, aptitude, interest, and temperament, requires effective tests and skilled technicians specifically trained for their use.

Standardized testing is based on statistical inference. It is perhaps the most tricky and most difficult field of meas-

DONCASTER G. HUMM

After working as a teacher, a psychologist in the Los Angeles Diagnostic Clinic, and personnel director of the Los Angeles City Schools, Dr. Humm has practiced as a psychologist since 1927 and been director of Humm Personnel Consultants since 1939. He has written many psychological articles and is an authority in the field of testing. A member of S.A.M. and numerous other professional societies, his interests also include telescope-making, raising monkeys, camping and punning.

urement. One does not measure directly and with precision as a cabinet maker measures lumber or a machinist measures metal. Rather one measures by successive estimates which are carried through until doubt is removed.

For example: If one uses one of the very best intelligence tests, one can be only relatively certain—99 chances out of 100—that the real IQ will be within eleven or twelve points of the IQ determined by that test. If one uses a single paper-and-pencil intelligence test there is one chance in a hundred that the real IQ will be greater or less than such an obtained IQ by more than nineteen points; and, one chance in a thousand, by more than twenty-four points.

As a consequence a skilled tester will consider such an IQ obtained from a single intelligence test merely as a first estimate. He narrows down such an estimate toward the real IQ by consulting tables which tell him what to expect of an individual with similar education and similar job level. If these show a lack of consistency, he proceeds with further testing until he is confident of the real IQ.

Failure to verify intelligence test findings—or, for that matter any test finding—is likely to result in the type of error which occurred in Jake's case. In that instance an injustice was done him by blocking off promotion and an injustice was done the company by failure to realize on the potentialities of a good man.

TESTING HAZARDS

One of the big hazards of personnel testing is individual test idiosyncrasy. This is a fancy term for the plain fact that some persons get scared when they take tests. But this hazard is only one out of many. There are also unfair coaching in taking tests, attempts to rig the answers to some tests, poor test administration, and poor interpretation.

It requires a good background and special training to avoid these hazards. A competent personnel tester has to know job requirements, he has to know the workers and supervisors he deals with, he has to know tests—their effectiveness and their limitations—he has to know statistics, especially the implications of statistical inference, and he must be adept both in the interpretation and the corroboration of test findings.

He must be a man of stature, tall enough to have his head in the clouds and his feet on the ground.

In a way he is a good detective, sensitive to clues. An incident will illustrate:

OUTMODED METHODS

The vice-president in charge of personnel of a large merchandising firm had come to take a training course. To give him a taste of the medicine he was going to administer, we gave him a battery of tests. Shortly afterward one of our technicians brought in to me two intelligence tests the man had taken, saying, "It doesn't look as though you can train this man. Both of the IQ's we found for him are in the low range!"

"But," I responded, "this man has just been promoted to vice-president over tough competition."

"Then, what's the explanation for his doing poorly on the other tests also?"

"It might be a number of things. Why not ask him to come in and talk it over?"

He came in with an embarrassed grin on his face and gave us his explanation. It was, "I forgot to bring my reading glasses."

The next day an individual test gave him a very superior IQ!

The pay-off was that the technician caught several squinters in the next month. She had become very conscious of test-subjects who had eye difficulties.

In spite of all the hazards, standardized tests as used in personnel appraisals are an improvement over former methods. Even though a single intelligence test may be "off" as much as twenty-five points in IQ in the very exceptional instance, paper-and-pencil intelligence tests average within five points of the real IQ. This has been proved to be much better than casual sizing up. The reason is that every item or question in such tests has been proved capable of showing difference in intelligence and the norms or standards of comparison have been determined by valid statistical analysis.

Old fashioned methods—especially those which put too much trust in interviews and application blanks—are often wide open to that stock attorneys' objection: "irrelevant, immaterial, and incompetent."

They are irrelevant in that they ask many questions which have not been proved to pertain to success on the job. I am reminded of a young Catholic who found it almost impossible to get a job in a militantly Protestant community and of a similar incident in the case of an agnostic. Some firms refuse to hire divorced men or women; some refuse to hire widowers with children. The list of similar inconsequentials is endless.

They are immaterial in that they often stress the unimportant. A story is told of an employer who used to keep his fox terrier in his office during the hiring interview. If the dog made up to the applicant, he was hired; if the dog refused to have anything to do with him, he was rejected. (Smart applicants soon learned to sprinkle anise seeds in their trouser cuffs!)

They are incompetent in that they do not effectively determine whether or not the worker has the characteristics needed for the job. The chief reason for this failure is that, ordinarily, the interviewer is governed by general impressions and cannot find out some of the things he would need to know. The result is that an applicant with good acting ability has an edge on others, since he is better able to make a good impression.

Results tell the story. We have already reported a reduction from 29.0% to 5.5% in problem employees by including testing in their selection procedures and using interviews only for what they are worth. Further, an airplane manufacturer reported an even greater reduction in problem employees, a halving of turnover, and a discharge rate of one-fourth of one percent.

TEST HISTORY

To understand this, one needs to understand the nature of the standardized testing of the so-called imponderable. This is a technology which has been developing for about eighty years. Like the development of the airplane its spurts have depended on a few geniuses, but its status is due to the consistent efforts of a host of toilers.

Wilhelm Max Wundt (1832-1920) was one of the first great trail blazers. In the seventies and eighties of the last century he inspired many students to bring about a change in psychology from a philosophic to a quantitative rational science. His basic pursuit was the measurement of individual differences.

Alfred Binet (1857-1911) was the deviser of the first successful intelligence test. He had observed that children learned to walk and talk and feed themselves and dress themselves at differing ages. He confirmed this by observing that children of the same age varied

CHAPTER HONOR ROLL

CONGRATULATIONS to the current leaders in the Chapters' Membership Campaign. Quotas attained to date are:

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greatly in their general mental development. He set about finding the average intellectual achievement for each year of childhood and finding a way of measuring the individual child against these standards. Out of his studies came the concept of mental age. This led three psychologists to invent the term, Intelligence Quotient (IQ) coincidentally. It is simply the mental age divided by the chronological age—that is, the *expected* mental age. A child of 10 is expected to have a mental age of 10. If he has a mental age of 8, he has 8/10 of expectation or 80 IQ. If he has a mental age of 12, he has 12/10 of expectation or 120 IQ. If this mental age is 10, he has 100 IQ. Any IQ below 90 is inferior; any above 110, superior; between 90 and 110, it is within "normal" range.

TEST CONSTRUCTION

Binet and Wundt together constitute the Moses of psychology. They blazed the pathway out of the wilderness of speculation into the promised land of Science.

They gave us the master plan for mental measurement. These are the steps:

1. Isolate the characteristics to be measured so that they are not confused with irrelevant characteristics.
2. Select a group or groups of individuals of known ability in the characteristics.
3. Devise stunts or questions (items) which will differentiate between those who are good and those who are poor in that characteristic.
4. Devise enough items thoroughly to sample all the ways the characteristic is manifested.
5. By careful statistical analysis set up a group of norms or standards which will reveal differences in individual performance.

Let us suppose we wished to make a test of arithmetical fundamentals. Our first step would be to isolate this ability. We would have to select a group of test subjects, all of whom had the same training in those fundamentals. To eliminate the effect of intelligence, we would select those of the same IQ; to eliminate differences in reading, those of the same reading ability; to eliminate eye difficulties, only those of vision corrected to 20/20. To be sure that all put forth their best effort, we would provide a reward commensurate with their final scores. It also would be well to equate the group with regard to arithmetical interest.

We would then set up a series of arithmetical problems, making certain there were several of varying difficulty for each fundamental operation.

Independently we would ascertain the arithmetical ability of each test subject. We would not do this on the basis of a simple criterion, such as teachers' opinions, record of school grades, or the subject's own statement, but rather on the basis of all of these plus independent examinations and any other information which could safely be deemed significant.

We would examine every problem we had devised to see if its frequency of correct solution increased with the known ability of our control subjects, and would discard any which did not.

We would then administer all the "good" questions to the test subjects and analyze the total scores statistically. We would need to have a sufficient number of test subjects ordinarily about 1000, to assure statistical momentum.[1]

If we carried out all these steps painstakingly, neglecting none, we probably would come up with a valid test of fundamental arithmetic ability.

We have been so technical with our readers for a purpose. This procedure in test construction is not always followed by makers of standardized tests. As a consequence some tests do not measure effectively. Some few, in fact, have been so superfically standardized that one cannot use them with confidence.

IMPROPER USE OF TESTS

A common fault is the use of inappropriate tests or inappropriate norms. We once discovered a firm which was attempting to select clerical workers without using clerical tests and using instead tests of mechanical comprehension.

To illustrate how much care must be exercised in supervising personnel technicians I am citing an instance that occurred in our testing laboratory. It happened on the first day we put a new technician to work at interpreting a test battery. On checking her work we discovered that she was attempting to in-

[1] *Statistical momentum assures one that averages and other statistical measures are trustworthy when the selection of subjects is well done. For example, the trustworthiness of the average of* 1600 *cases is ten times that of* 16 *cases.*

terpret the mechanical comprehension of an engineer from norms that were appropriate only for assembly workers.

Another fault is the use of tests with low validity, a term used to designate the test's ability to measure what it purports to measure. This quality is reported by the correlation coefficient, r, a measure easy to calculate but applicable only under certain rigorous conditions and a measure difficult to interpret. It requires a validity where $r = +.866$ to get results 50% better than random chance; yet there are tests with very much lower reported validities.

Fortunately most test constructors do not offer for distribution tests which prove to be imperfectly standardized. One of them, who found that his test of higher-level intelligence had in it several items which were answered correctly more frequently by persons of known low intelligence than by those of known high intelligence, withheld the test from distribution.

This points up the greatest hazard in current personnel testing, the hazard which arises out of the use of tests by personnel men who do not have adequate training. Sometimes the hazard is also manifested by persons exposed to an adequate training which did not take.

SOUND PERSONNEL APPRAISAL

We have come to feel that an adequate personnel appraisal cannot be made unless it answers the following questions:

1. Is this worker ready to take this job? In other words, does he or she have adequate training, credentials, and experience?
2. Is he able to do the operations of the job? Does he have fitting intelligence, skill, and aptitude?
3. Will he like the work? Will he be satisfied to remain on the job because it fits his pattern of preferences?
4. Will he get along on the job? Does he have a temperament which makes him reliable, trustworthy, cooperative, stable, industrious, and mentally healthy?

Our heaviest headaches come from the failure of a few testers to ask all of these questions or to eliminate reasonable doubt from the answers. That failure arises, in turn, out of the use of poorly standardized tests or the misuse of good tests—usually the failure to corroborate test findings.

JOBS
Wanted & Open—Pages 30-31

Our greatest gratification arises out of the many testers who are meticulous in answering those four questions and who are equally meticulous in proving their answers. We know one personnel man whose batting average is so high that strike-outs are practically non-existent.

He tells me that he goes on the principle that all measurement—including test measurement—is subject to accidental error. As a consequence, he is not only careful to answer the four questions, but he also checks every answer both ways from the ace.

INADEQUATE APPRAISAL

On the other hand, we know another personnel department which attempts to make its appraisals by using one antiquated paper-and-pencil intelligence test, one personality test, and an unstandardized interview. This procedure leaves Question No. 3 completely unanswered and answers to the other questions unverified. Do you wonder that the company has high turnover and other personnel problems?

Much of the widespread use of personnel tests seems to have the earmarks of a fad. Scientific fads—or should I say fads taken up by pseudo-scientists—have a way of kicking back. Already there is an indication in business and popular publications that what seems to be a hurricane of protest is forming. It seems to center around a core of social issues. The chief criticism is that much of the testing being done is unfair to the worker.

If personnel testing is unfair to the worker, either by permitting an inferior applicant to be hired in preference to his betters, or by rating a good man lower than he should be, personnel testing deserves censure. Anything in industrial and business procedure which denies equal opportunity to every worker is a thing to be revised or discarded.

In the long run, however, the success of the testing movement depends upon its effectiveness. If tests help select good employees and screen out the poor, the problem of the social issues can be dealt with separately. There is no question but that some testing now being done is inefficient. Two examples will show this:

One is the case of an automobile distributor who attempted to select salesmen by the use of a sales aptitude test only. The experiment turned out so unhappily that he has lost his faith in tests. His experience is in sharp contrast to that of the personnel manager mentioned earlier in this paper. He regularly uses a battery which answers all four questions of the recommended "master plan" and gets good results.

Another is the case of a company which tried to set up a full scale program using both test information and non-test information but selected a man with no test background to administer the program. Since he had no inkling of the statistical implications, he was unable to determine when test results were unreasonable, since he could not compare them with educational level reached or job status reached. As a consequence, he had to proceed by rule-of-thumb—with unhappy results.

All this is the reason your writer believes it is time to take stock.

The inventory indicates to him an unreasonable amount of ineptitude in the administration and interpretation of standardized tests. On the one hand we have the practical personnel man without training in psychometrics who makes mistakes because he is unaware of technological implications; on the other, theoreticians who are unaware of the practical implications.

TEST ACCURACY ATTAINABLE

Theoretical psychologists should be more ready to take a lesson from the automotive industry. It has long known that it is poor policy to put a new model car on the market without putting it through the torture of the testing ground. A test constructor should be equally careful to get the bugs out of his test before it interferes with the destiny of the worker.

To sum this all up: There are good tests. There are bad tests. There are competent test users. There are incompetent test users. The good should be preserved; the poor, discarded.

The field of personnel testing is fraught with more technical difficulties than any other field of measurement. It has, however, reached a stage of development where highly accurate results are attainable. These highly accurate results, like those attainable on a precision lathe, are attainable only in the hands of the highly skilled who are meticulously careful. Trained men get results. ■

Various principles for management level job evaluation are developed by the author, giving answers to such questions as: What factors are significant in determining the need for management job evaluation? What advantages and problems may be expected from such an evaluation? What management positions should be subject to evaluation, how should the upper and lower limits be set? Do the differences between clerical and management jobs require that separate evaluations be made?

Management Level Job Evaluation

By Robert E. Sibson
Personnel Director
Schick, Incorporated
Lancaster, Pennsylvania

THERE seems to be a growing recognition among those close to the wage and salary problems of leading companies that there is a need for a formalized method of evaluating the worth of management and staff jobs and that there are also special problems encountered when an evaluation of these positions is undertaken.

The need for evaluating higher level jobs has resulted in the installation of job evaluation plans specifically designed to measure the relative values of these jobs in a few companies. Other companies have followed a different course, developing "refinements" in existing evaluation plans in an attempt to measure high-level and low-level salaried positions with equal accuracy.[1] In still other instances, the existing evaluation system has merely been extended upward to cover higher paying jobs. Such an extension of the yardstick has usually been accompanied by the adoption of more flexible administrative policies in the higher graded jobs in recognition of the unique problems of evaluation encountered in management and staff positions.

In spite of the various attempts to meet the needs of management job evaluation, it is still an unresolved problem in most companies. A great deal of technical research and development work must still be accomplished, guided by certain principles which are fundamental to any management job evaluation approach. It is the purpose here to point up some of these basic principles for management job evaluation.

The first question which must be resolved is whether or not management and staff jobs should be subject to any classification system. For one thing, it must be recognized that management jobs will be evaluated and a dollar value attached to them under any circumstance. Job evaluation merely substitutes a formalized technique of gauging all of these positions with the same yardstick instead of relying on individual (and highly subjective) judgments. Establishing relative job worth in managerial positions by management job evaluation must be assessed by comparing it with the system or procedure currently used to set management salaries and other alternative methods which might be adopted.

If a management job evaluation plan realistically recognizes the unique problems involved in management and staff jobs, it can claim the following advantages:

1. All management and staff employees are treated in a consistent manner.
2. A logical internal salary relationship between all management and staff personnel results.
3. These results can be rationally justified.
4. Overall compensation scales can be established which make it possible to carry out the company's basic compensation policies.
5. A significant portion of payroll costs can be controlled. At least top management *knows* what is happening to management as well as clerical payrolls.
6. Top management can predict, with

ROBERT E. SIBSON

Since receiving his B.A. from Yale in 1945 and his M.B.A. from Wharton in 1949, Robert Sibson has worked as a consultant for Simpson and Curtin, as personnel manager and assistant to the director of industrial relations for Otis Elevator Company, and is now personnel director of Schick, Incorporated. His many published articles have been concentrated in the personnel and labor relations fields.

[1] *Hay, Edward N. and Purves, Dale,* The Profile Method of High Level Job Evaluation, *Personnel, September 1951.*

greater accuracy, the effect of alternative wage policies on both management payroll and management compensation.

7. Individual bargaining can be controlled within limits.

There are a number of related advantages likely to come from management job evaluation. The cornerstone of job evaluation at any level is job study. Thinking in terms of job content, responsibility, and assignments, can play a vital role in the management development, organization, and management appraisal programs. The resulting descriptions or functional guides can also be of value in the employment function.

DISADVANTAGES WEIGHED

While the advantages of a formalized evaluation system are many, the possible disadvantages should also be considered. Actually, the disadvantages which some companies have encountered when they undertook a management job evaluation program have been problems encountered or errors committed in application rather than inherent disadvantages of formal evaluation.

Probably the cost of such a program is the most important reason why some companies have considered and then rejected a formal evaluation of management jobs. Aside from the usual staff personnel costs found in any evaluation program, management level job evaluation involves considerable indirect costs. Because of the complexity and stature of the jobs studied, such a program generally requires the direct participation of line management in preparing job descriptions and evaluating the jobs.

Great care must also be exercised to make sure that an evaluation plan does not rigidly bind management action or stifle the individual development of members of management. This is generally accomplished by thinking in the terms of functions, objectives and areas of responsibility rather than specific duties. An equally important though less tangible problem is management resistance to its own job evaluation. A thorough selling job must precede any such installation. While employee acceptance is important in any plan it is crucial in management level job evaluation which depends upon much participation.

The specific need for a management job evaluation program in any given situation would depend on many circumstances. Primary among these would be the size of the company. A firm with a total of 1,000 employees would likely have less than fifty management and staff job categories. In such a company, top management could review the compensation of the management group personally and the possible benefits of a formal plan would probably be outweighed by the time and cost involved in designing, installing and administering the plan. A company with 50,000 employees would be faced with an entirely different situation and a workable management job evaluation program could contribute a great deal.

There are other factors which would have an effect on the value of management job evaluation systems such as the geographical dispersion of company operations. Those who have had experience with management job evaluation are quick to cite the difficulty of administering and controlling the application of such programs. A company with many widely dispersed operating units might feel that this consideration would offset the values accruing under a management job evaluation program. This would be particularly true if the average size of these operating units were small.

The extent of decentralized responsibility in a company could also influence the value of management job evaluation. If the company operations are widely dispersed and highly decentralized, the company might be able to evaluate the worth of most of the management positions directly in terms of results.

Assuming that it is decided a management level job evaluation system is to be established, which positions should be included in the classification? This question involves a policy determination.

SETTING LOWER LIMITS

In determining the lower limit of positions to be evaluated by the classification system, there are a number of factors which should be considered. From an administrative point of view, it is desirable to make the break between management and clerical jobs coincide with the distinction between exempt and non-exempt positions. It would also be ideal, of course, to make the break at the lowest level of management or staff positions. In most companies, however, this would be a most difficult undertaking. For one thing the two objectives are not always compatible. Furthermore, if all jobs involving supervision were included, there would be considerable overlapping between the management and clerical salary structures. Finally, there might be differences between the lowest level of management in the various organizational units of most companies and this would present complications.

Actually, it is not at all certain that all jobs involving any line supervision should be included in the management evaluation system. Some employees who exercise supervision or direction may not be a real part of the management team. For instance, those who exercise only the "technical supervision" of the most skilled in a group should be eliminated if they do not carry out and interpret management policy. Technicians with working assistants should usually be eliminated from the system for the same reason.

STAFF JOBS INCLUDED

In staff jobs the distinction between management jobs and engineering positions on the one hand and non-management technical and statistical positions on the other is even more difficult to distinguish. A distinction must be made, however, and it is suggested that the judgment be based upon the amount of creative thinking involved, the responsibility for recommendations and proposals, the importance of the projects assigned, who receives the recommendations prepared, and how much weight is placed upon the recommendation submitted. The influence that the individual might exercise over the formation or interpretation of company policy and the extent of staff control exercised would be other pertinent criteria for determining which jobs should be classified under the management system.

The determination of how far up in the company organization the management job evaluation system should be applied is a question which can only be judged by the top management of the company. Many factors, such as personal relationships between top management personnel, the question of top management incentive, or of management status can only be weighed by the company president.

Aside from some few concrete guides, the exact upper limit of a management job evaluation program will be determined largely by intangible considerations, not easily evaluated by the personnel administrator. The specific plan

Proposed Amendments to S.A.M. By-Laws

In accordance with Article X of the S.A.M. By-Laws, the following amendments to the By-Laws, recommended by the Executive Committee at its meeting on January 28, 1956, are hereby published, prior to their final consideration at the meeting of the Board of Directors on April 28, 1956; (Additions to the By-Laws proposed by the amendments are in italics, deletions are in parentheses.)

By-Laws, Article V. Board of Directors

"The Board of Directors shall consist of President, First Vice President, Second Vice President, Secretary, Treasurer, a representative of each of the duly authorized local chapters, and the retiring President . . . The retiring President shall be the Chairman of the Board (act as Director-at-Large for the non-chapter members of the Society) and shall hold this office until such time as there is another change in the presidency when he shall relinquish it to the newly retiring president.

"Directors who are or were elected National Officers—namely the President, First Vice President, Second Vice President, Secretary, Treasurer and Chairman of the Board (Director-at-large) — the most recent past president—shall serve for a one year term and thereafter until their respective successors shall have been elected and installed."

By-Laws, Article VIII. Officers

"The principal Officers of the Society shall be the Chairman of the Board, President, First Vice President, Second Vice President, Secretary, and Treasurer."

The purpose of these amendments is to make the immediate Past-President the Chairman of the Board instead of Director-at-Large, and to add the new position of Second Vice President. Both changes are designed to give greater strength and continuity to the official organization.

The following amendment to the By-Laws was considered favorably at the meeting of the Board of Directors on November 5, 1955, and is hereby published in accordance with the By-Laws prior to its final consideration at the Board of Directors meeting on April 28, 1956:

By-Laws, Article III. Annual Dues

"A graduating Senior member of a Student Chapter may join a Senior Chapter at the reduced fee of $5.00 for the first year and without payment of any initiation fee, provided membership in a Senior Chapter is completed within four months of the date of graduation, or within four months of termination of military service when military service immediately follows graduation."

Harold R. Bixler
Executive Vice President

designed by the personnel group should never inherently assume that jobs will be evaluated up to a certain level without the sanction of top management.

When these preliminary considerations have been resolved, the most logical question which might next be raised is why the company should not merely extend the salary evaluation plan now covering the clerical and technical group upward to include the management group. Most clerical evaluation plans *do* evaluate a considerable number of management level jobs. Thus, there would appear to be a basis in precedent for extending the current salaried plan upward if it was decided that some or all currently unclassified management jobs should be evaluated. The simplicity of the approach provides a strong temptation to follow such a course.

While opinions are by no means uniform on the question of extending a clerical plan to cover a large number of management positions, it is the thesis here that such an approach is impractical. This view is based first on a number of administrative considerations not directly a part of job evaluation. It is also based on the problem encountered whenever all levels of salaried jobs are measured by the same system. Finally, it is believed that separate evaluation systems for management and clerical salary jobs is the logical result of the application of sound principles of job evaluation.[3]

The adminsitrative advantages of separating the management and clerical systems are numerous.[4] For convenience in consideration, some of these administrative advantages are outlined:

1. The formation of overtime pay policies is facilitated.
2. Appraisal and compensation review programs can be tailored for the specific needs of each group.
3. Negotiated general increases need not be extended upward into management level jobs. Instead, a similar amount may be put in the "merit budget" for management personnel.
4. The job evaluation process itself can be a management development device.
5. Salary structures at all company locations can be realistically constructed for each major group.
6. The very adoption of separate rating systems helps to add status to management level jobs.

From the technical point of view, it is possible to design factor comparison and related types of job evaluation systems which will evaluate all job levels satisfactorily. However, the resulting system will be far more complex and costly than would otherwise be required to evaluate office clerical positions. Furthermore, when applied, a different meaning is used in many of the factors when comparing management level jobs. Therefore, a different yardstick is actually used at different job levels so that two or more systems are used anyway.

MANAGEMENT DIFFERENCES

The inherent differences between management and clerical jobs have long been recognized but it is important to identify them carefully before the evaluation of management level positions is undertaken. These differences not only make the case for establishing separate evaluation systems for management and staff jobs but also provide a starting point for developing the requirements for a successful management and staff evaluation system. The actual differences between the two types of jobs could fill a volume but, in order to focus upon the most significant differences from the point of view of describing job content and establishing job value, the differences may be classified into: differences in the nature of the work assignments, responsibilities and personal relationships.

In clerical jobs, the work assignments are specific, generally repetitive and have clearly prescribed procedures with little need or opportunity for deviation. Management jobs involve an area of responsibility rather than specific duties and require that the incumbent work toward general objectives. There is little homogeneity in management work assignments. Each manager develops his own methods, systems and sequence of meeting objectives. In management and staff jobs specific duties cannot be described on a day-to-day basis and standards can only be established in the long run and measured in terms of results rather than in more readily measured quantity or quality standards.

A final inherent difference in work

[3] Evaluating Managerial Positions, *Studies in Personnel Policy Number 122, National Industrial Conference Board, Inc., 1951.*

[4] *Hubbell, N. D.,* A Salary Administration Plan for Factory Supervision and Staff, *in Handbook of Wage and Salary Administration, American Management Association.*

assignments is that in management jobs there is some original and creative thinking inherent in all work assignments. There are also many complexities which interact on most management jobs. In order to carry out assigned functions properly, management jobs inherently involve *understanding* and *original thought.*

In clerical jobs, the training required is usually technical and the skills required are "mechanical" in the broadest sense of that term. In management jobs, on the other hand, the training must be broad and reflect "education" and the development of thought processes as well as the acquisition of technical knowledge.

The inherent differences between management and clerical jobs stand out in even sharper relief when gauged against the responsibilities involved in the two types of job assignments. In clerical jobs, the responsibility of the individual is only to follow the procedures outlined, handle work in the sequence determined by someone else and meet the quality and quantity requirements prescribed for the job. In management and staff positions, short run responsibilities are self-imposed and the individual must exercise pressure on himself to ensure that day-to-day results will cumulate to meet general objectives. In the terminology of job evaluation, the supervision received in management is broad or general while in clerical jobs the supervision is close, continuous and detailed.

RESPONSIBILITY SIGNIFICANT

While responsibility is very limited in clerical and technical positions and represents a negligible part of the worth of such jobs, it is a major part of any true management or staff position. Deviations in performance can be tremendous in management positions and the responsibility rests squarely with the individuals involved. As the results or accomplishments can usually be evaluated only in the long run and because the results can be of great importance to the company's operations, the responsibility factor is a very significant aspect of management positions.

The final inherent difference between management and staff jobs on the one hand and clerical and technical jobs on the other is the different requirements for relationships with others. Basically, the work of line management is to work through others to accomplish assigned objectives. The very stratification of a firm's organization reflects this situation.

In line positions, the direct line supervision relationships between supervisor and supervised are most important. Conversely, in staff positions, there is no authority present and the relationships call for influence rather than direction. Both of these types of relationships obviously play a very small part in any clerical or technical position not only because the number of persons influenced are small but the nature of the things influenced are of far less significance.

If the consensus of thinking reflected in this study is correct, the evaluation of management level jobs should reflect certain basic principles. It is important, of course, to distinguish these principles from detail practices and the detailed provisions of individual plans. The principles which are listed below are generally applicable to all companies when the evaluation of management level jobs is undertaken.

The first principle of management level job evaluation is that a separate system for evaluation should be used for all management jobs. The need for this has been discussed in detail and basically stems from the fact that the duties and characteristics of management jobs are inherenly different from those of clerical jobs.

Following the same reasoning the second principle is that the factors used to evaluate management jobs should be carefully selected and tailored to the inherent characteristics of management positions.[5] These factors should also be carefully defined in such a way that they will make it possible to measure functional duties rather than detailed assignments and that they will be worded to reflect the actual nature of management jobs. For instance, the educational factor cannot be defined in terms of formal schooling required because the amount of formal schooling is not as important as such considerations as: the intensity and extensiveness of understanding, the ability to reason, deductive thinking ability, and the ability to appraise and evaluate new situations. Similar comments can be made in regard to the experience factor. Here the number of years of work experience are not of first importance. What really counts is the intensity of that experience and how well that experience might prepare the individual to meet new situations and challenges.

A third principle is that a management evaluation system must place great emphasis on flexibility and broadness in determining the worth of management jobs. Because of the nebulous nature of the work assignments, the broad and long-run nature of responsibilities involved, and the overwhelming importance of relationships in management jobs, the worth of jobs with similar work assignments will vary a great deal. If individual performances can cause widely different day-to-day job content and widely varying results, the evaluation of job worth itself must be done in broad terms. In effect, this principle means that greater emphasis must be placed on merit rating and individual appraisal and relatively less emphasis

[5] *Extensive research among existing management level plans indicates that the following factors have particular significance when measuring management level jobs: education, experience, responsibility, accountability, supervision exercised, relationships with others, planning, influence on policy making, level and type of supervision received.*

CHAPTER MEMBERSHIP STANDINGS

as of January 1, 1956

New York	403	Sacramento	71
Northern N. J.	362	Puerto Rico	71
Philadelphia	360	Providence	69
Cincinnati	299	Knoxville	64
Chicago	289	Columbus	64
Cleveland	274	No. Alabama	64
Lancaster	261	Trenton-Del. Val.	64
Pittsburgh	233	Alabama	61
Detroit	209	Reading	60
Boston	193	Clearing	56
Washington	193	Calumet	55
San Francisco	163	Central Pa.	55
Milwaukee	152	Hartford	54
Dallas	145	Greenville	51
Los Angeles	135	Charlotte	48
Worcester	126	Western Mass.	45
Indianapolis	125	Central N. Y.	44
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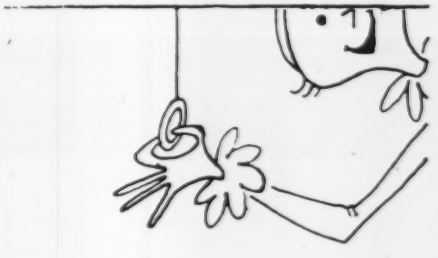

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on job evaluation.

In addition, job descriptions should be functional in nature because of the broadness of the factors selected, the requirements for flexibility and the fact that the system would inherently be measuring functional duties and responsibilities. The descriptions must outline the areas of responsibility assigned to the position, the general types of work involved and the principal relationships which exist.

Functional descriptions of job content would in turn, require that the resulting in-grade salary progressions be very broad and that the percentage differentials between grades would also have to be broad. In effect, this would mean that the salary grades would group jobs which were broadly similar. It would also mean that there would be considerable movement within salary grades. To control this movement and to place an individual in his proper spot within the salary grades would, as already noted, require that considerable attention be directed to the problem of individual appraisal and compensation review.

There are also a few technical features connected with the evaluation of management jobs which are broad enough in scope to qualify as general principles. For one thing, it is probably necessary to evaluate management level jobs on some job-to-job comparison systems.[6] Under such a system, the evaluators would determine the relative degree of each factor used in evaluation by comparing the requirements of that job with the requirements of other management jobs. In essence, the evaluators ask whether the job being evaluated requires more of, less than, or the same degree of a given factor as other management jobs. A technique of forced distribution is usually required in management job evaluation to avoid "bunching" of jobs.

Point evaluation, in which jobs are compared against written descriptions of job requirements, is not practical in management job evaluation. It would be virtually impossible to describe degrees of each factor in a classification system which would define in any significant way all the combinations of different duties and functional responsibilities which can be found in management level jobs. The diversity of management assignments in themselves would make it impossible to define in any realistic way increasing degrees of difficulty which could be usefully applicable to all management jobs.

It is also important to avoid forced weighting of factors or a maximum weight value in any factor because man-

[6] *Warren, B. B.*, Evaluation of Managerial Positions, *in Handbook of Wage and Salary Administration, American Management Association.*

agement jobs cover such a tremendously broad range and involve such diverse component requirements. Finally, it is probably desirable for management level jobs to establish some means of pairing job components for each of the factors. For instance, in measuring education or understanding, it might be desirable to get a comparison of both the number of subjects that must be understood and also the intensity of knowledge required in any given subject area. This would give the evaluator a better guide in comparing the relative requirements of different jobs.

While the need for some formalized evaluation system for management level positions has been thoroughly demonstrated by experience at many companies, there is still wide disagreement among the experts on just how this should be accomplished. Many, for instance, would disagree with the basic thesis here that management positions should be evaluated under a special system. The basic virtue of such a procedure is that it focuses attention on the characteristics of management jobs and measures these jobs according to those considerations which are really relevant to management jobs. Job study and job understanding are the cornerstones of sound evaluation.

In addition, a separate evaluation would, it is suggested, be simpler for the company personnel to understand and administer. The procedure would also make it possible to adopt salary administration policies specifically designed for this group.

In essence, however, differences in technique are not critical. So long as all systems recognize the inherent characteristics of management level jobs, and measure these jobs according to these characteristics, they can all accomplish the function of setting a relative worth on management jobs. Whichever system represents the best "management tool" for a management group is the best system for that company. ■

CIPM Reports . . .

EDUCATION FOR MANAGEMENT UNDER THE VATICAN

EDUCATION for business management, industrial relations, public opinion, and labor organization techniques are among the subjects of study at the International University of Social Studies, an educational institution with headquarters in Rome, Italy. This University was started in September, 1944, with the aim of preparing "men and women for the task of positive leadership against the organized forces of materialism . . . by uniting the training in pragmatic techniques with the teaching of social sciences."

At this time, Father Felix Morlion, a Dominican priest who had escaped from his native Belgium with a million gold marks reward put on his head by the Nazis, was asked by the Vatican to establish a school for the training of democratic leaders and a graduate school of political science. All this was, and is, part of the Pro Deo movement—a movement which is designed to combat the teachings of communism with the teachings based on democratic-Christian principles. Thus, the International University has established courses, forums, and lectures on subjects which vary from classical Greek and humanities to industrial relations, communications, and labor relations.

The faculty of the International University includes Italian leaders in the various classical subjects and 54 visiting lecturing experts who teach the new social science and technical subjects. The University is interdenominational, and its student body is open to all creeds. Its curriculum includes a four-year undergraduate program, a graduate school called the Higher Institute of Social Studies at the University of Turin, as well as centers of study in Rio de Janiero, Bogota, Lima, and Ciudad Trujillo in the Dominican Republic. Based on the realization that "you can't save souls in a dictatorship," the International University provides its students with an understanding and an ability to cope with the social and industrial conditions in which they find themselves today, so that they may prevent the kind of economic and political conditions that lead to dictatorship. At the University, it has been possible to introduce, for the first time within the curriculum of a European university, a series of courses on business management that are part of the Economics Department's four-year curriculum.

INDUSTRIAL RELATIONS SCHOOL

Its School of Industrial Relations for Middle Management is designed to give training to industrial leaders, to promote harmonious relations between labor and management, to bring about a clear understanding of the common industrial good, and to underline the responsibility entailed in industrial leadership. To spread the teachings as far as possible, the courses in this department are open to students who have had no formal education training, but who have been recommended by their industrial supervisors and have a background in industry.

The International University believes that these courses in current problems, combined with the classical and spiritual education found in traditional universities, together fulfill the University's purpose of creating "a synthesis of the more speculative Latin cultures with the practical spirit of Anglo-Saxon tradition, stressing the universal value contained in the American way of life."

TURIN'S INSTITUTE FOR ADVANCED MANAGEMENT

There is another important aspect of management education in Italy that is being carried on by the Institute for Advanced Management in Turin. This Institute was established in 1951 through the joint efforts of CIPM, a number of progressive Italian management leaders, and the combined support of the Italian and American governments. It has specialized in management and marketing subjects, and its attendance has increased to a point that it has now become a recognized institution in the field of higher education in Italy. Also, the Institute presently holds the unique position of being entirely privately financed and operated outside the regular state university system of Italy. ■

Jane Dustan, CIPM Editor

S.A.M. is a charter member of CIPM, the Council for International Progress in Management, the American non-profit, non-political organization devoted to the practice of scientific management on the international level. CIPM is in turn a member of the International Committee of Scientific Management (CIOS) which represents the organized management societies of twenty-six nations.

New Management Writing . . .

PERSONNEL AUDIT AND APPRAISAL

By Thomas J. Luck, McGraw-Hill Book Co., New York, 1955, $6.00.

IF "scientific management" means effective management operating decisions made by measurement, then "Personnel Audit and Appraisal" by Thomas J. Luck can be rightly classified as the *handbook* of measuring devices in the field of manpower management.

Most of the measuring instruments are described in sufficient detail to enable a management group to decide on the *kinds* of devices that might be well worth trying. Luck quotes N.I.C.B. and the Scott, Clothier, and Spriegel Studies, plus the Monthly *Labor Review* "Reports on Turnover" as the reasons why appraisals should be made. He mentions the growing use of these devices and describes them as "control" tools. He classifies the five methods of auditing the personnel functions as follows: the statistical approach through the firm's records, a check-list questionnaire, sociometric studies, an employee questionnaire, and employee interviewing.

It would seem to the writer that consideration should be given to Tom Spates' observation that personnel activities grow out of three motives—imitation of others, fear of unions, and the conviction that the dignity of the individual in his work place should be carefully guarded by management, to the advantage of both management and the individual.

If the selection of the appraisal devices is made on the basis of the latter reason, then the effect of the devices on the total social situation must be considered. The use of any appraisal technique will always be a communication media and, as such, may not say to the people what it is intended to say if the scene—the setting—in not compatible with the act. Sometimes these activities are like playing the love scenes of "Romeo and Juliet" on the factory set for "Pajama Game."

If, however, the objective is understood, the multi-dimensional nature of the situation is appreciated, and if such two dimensional devices can be used effectively, then this book can supply the information about all forms of appraisal needed to do a job.

Some of the devices are more completely described than others. The chapters with greatest strength are those referring to:

Analysis of Company Operations
Interviewing Methods
Questionnaires in Measuring Morale
Sample Morale Survey
Job Specifications as an Aid in Appraising Employees
The Application Interview
Employee Performance Ratings

Those that seem to be incomplete are those referring to:

Functional Analysis Questionnaire
Sociometric Methods of Appraisal
Indirect Methods of Appraisal

The chapter on Functional Analysis is complete in the traditional manner. Such devices are only as successful as the objectivity of the one who makes the survey. Experience with a similar form where line as well as personnel people answered the form, showed a tendency to subjective treatment. Needless to say, the converse was also true. Outsiders, unfortunately, cannot do the job. In multi-plant operations, headquarters auditors sometimes can do an effective job if they are sensitive and permissive enough not to be threatening. If they are not, they can do more harm than good. A further danger in the use of these forms is that negative answers are treated as negative scores for the personnel department, whereas positive scores are regarded as the effects of good management usually only attained as the result of the actions of the total unit. The difference between the personnel administration of a company and the performance of the personnel department may or may not be a cause-effect relationship; the former is a name for the "way of life" in the whole company, the latter a service unit which has jobs to perform while it may or may not be spreading the philosophy of good manpower management. Fundamental appraisal forms to separate the elements in this dilemma are not in this book, nor in any other of which the writer knows.

The chapter on Sociometric Methods is rather incomplete and out of date. There have probably been more techniques and approaches developed during the last five years than during the previous twenty. Yet most of the material presented indicates that the author's knowledge is limited to the Hawthorne experiment. The absence of reference to the material presented over the last four or five years in the "American Journal of Sociology" and "Human Relations" is a serious omission in such a text.

The same is true of the section on Indirect Methods. The implications of inter-relations that are to be developed through the more skillful use of sociodrama (not role-playing as ineptly used) are not discussed nor are some of the techniques of multiple role-playing which can be used in the manner Maier indicates. These things should have been treated for the text to have achieved the completeness intended.

With awareness of the above indicated weakness, it is still possible to commend the book to those who would like to examine the possible methods of appraisal of the personnel function in operation. The theme recurring throughout the book is that if financial, sales operations and production operations achieve more efficiency through the use of appraisal devices then appraisal of the processes of personnel administration should contribute to the effectiveness of the business. This theme is as valid as mother love, anti-sin, and democracy. The difficulty is that the process of appraising this multi-dimensional activity still is one of the really unsolved problems of business.

by H. A. Zantow
Personnel Director
Franklin Baker Division
General Foods
Hoboken, New Jersey

MONEY AND MOTIVATION

By William F. Whyte, Harper & Brothers, New York, 1955, $4.00.

IT IS TIME, suggests William Whyte, to reexamine the fundamental assumptions of economic incentives which are inadequate because they are based on (1) the discredited economic man theory (i.e., we're all out to maximize our economic gains), and (2) values (primarily management) concerned with how workers *should* behave and not how they actually *do* behave. A new model of socio-economic man is necessary.

To accomplish this objective, Whyte begins by analyzing the dominant as-

sumptions of F. W. Taylor and his followers. He concludes that scientific management followers basically assume that

- Man is a rational animal striving to maximize his economic gains. It follows that the employee ought to be paid according to how much he produces.
- Man is an isolated individual when it comes to computing his salary. He is not affected (or at least *should* not be affected) by work group norms and pressures.
- Man, like a machine, can be treated in a standardized fashion. While individual differences are recognized, it is assumed that there is "one best way" to do the job so that variations in method of work can and should be eliminated.
- Man, like machines, needs to be stimulated by management to work. Machines are stimulated by electricity; man, by money.

Using these assumptions and guaranteeing the employee a maximum rate and no change in rate unless there is a significant change in the machine or method of operation, incentive engineers have constructed numerous incentive systems. Very few work according to the way the engineers assume they should. For example, employees tend to set quotas on what *they* think is a fair day's work and refuse to go beyond them even if they realize they can.

The answer, replies Gilbreth (according to Whyte), is that incentive schemes require the "hearty cooperation of men." Obviously, Gilbreth would point out, in the cases where incentive systems aren't working according to plan, it is because the new mental revolution that Taylor so correctly defined years ago has not occurred.

Whyte accepts the suggestion that the human factors may be one set of factors that are "gumming up the works." But he does *not* accept the idea that it is the worker's fault (e.g., 5 percent of them work, 10 percent think they work, and 85 percent would rather die than work), nor is he satisfied to simply label the problem as a human one. He wants to find out *why* the employees behave the way they do. *Why* isn't there a "mental revolution" or "hearty cooperation of the men?" Why don't the incentive systems work as they are designed?

If we ask the incentive engineer, he readily admits that "money alone won't move a man to work." "What we really need is the proper human climate of cooperation, trust, and so forth."

However, he rejects this requirement as "unreal," "too unwieldy," "requiring a staff of psychologists running around the shops" probably mass "psychologizing" everyone. Although the engineer rejects economic man and accepts the importance of "human relations," he also rejects the latter as being almost impossible to achieve.

Instead of damning incentives (as some "human realtors" have done), or "human nature" (as some incentive engineers have done), Whyte tries to take a close look at the factors *in the work place* that may be the cause of the difficulties.

This results in some of the most fascinating research material on incentives this reviewer has ever read. Whyte sticks close to the facts. He makes only those conclusions that come directly from his data. He is careful to point out their limitations. Moreover, he writes so clearly, concisely, and in a down-to-earth manner that neither the practical man nor the social scientist will have difficulty understanding him, although the latter may be "shaken up" by the fact that one of their most eminent colleagues is willing to write so clearly.

Whyte, drawing on the work of many researchers,[1] gives us an intimate, first-hand picture of the human problems concerned with when workers meet the incentive system, "beat" the time study man, restrict quotas and goldbrick, and "raise hell" with their own members who are "rate busters."

Next, Whyte turns to an examination of plant-wide human problems among workers, between management and workers, and between workers and their union. He concludes that plant-wide cooperation depends upon creating and maintaining a particular kind of *social system* (as well as an economic incentive system). He discusses the nature of this social system by giving some actual exemples (e.g., The Scanlon Plan) from which he abstracts the basic characteristics into a theoretical scheme which he believes can then be applied towards understanding other human problems in the plant.

Briefly, the theoretical scheme is founded on four basic concepts of symbols, sentiments, activities, and interaction. It is presented modestly as a beginning rather than as a final edition. The theory should be of especial interest to researchers.

To summarize the conclusions of primary interest to administrators:

> "Workers will restrict output to a point well below their capacity.
>
> "Workers will develop many inventions which they will keep secret from management.
>
> "When they are being observed for rate-setting purposes, they will use all their ingenuity in working slowly and yet giving the impression of working fast.
>
> In spite of all efforts to compensate for such worker deception, time-study men will set some rates that are unfairly tight and others that are unnecessarily loose.
>
> "The coexistence of incentive jobs and nonincentive jobs and of tight and loose rates will create endless disturbances in inter-group relations."

"There should be nothing startling about such statements. They will be accepted and even taken for granted by many experienced factory people. The problem is that such facts of observation are not accepted as the base upon which a new theory of incentives must be built."

The standard piece-rate theory assumes:

> "Workers will make an all-out response to such incentives.
>
> "Workers will work at a normal pace when they are being time-studied.
>
> "When proper study methods are used, there will be no inter-group problems because
>
> a. there will be no tight and no loose rates, and
> b. the nonincentive workers will accept the extra money received by incentive workers as compensation for extra effort." (Pages 261-262).

In closing, it can be said that this is a very interesting, provocative, and well-written book. It will be useful not only for administrators and incentive engineers but also raises a host of hypotheses that can provide "meat" for some long range research on "men, money, machines, morale, and motivation." ■

Chris Argyris
Associate Professor
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[1] Melville Dalton, Donald Roy, Leonard Sayles, Orvis Collins, Frank Miller, George Strauss, Friedrick Fuerstenberg, and Alex Bavelas.

MARCH CHAPTER ACTIVITIES

CHAPTER	SUBJECT	SPEAKER	TITLE	PLACE	DATE
Alabama	Management's Responsibilities in Industrial Leadership	T. Scott Avary	V.P., West Point Mfg. Co., West Point, Ga.	Tutwiler Hotel	13
Baltimore	Management Controls that Will Increase Office, Plant and Sales Efficiency and Save You Time and Money	To Be Announced			
Binghamton	Making Administrators Out of Specialists	M. Wright	Consultant, General Electric Co.	Arlington Hotel	14
Boston	The Future of Automation	Leonhard Katz		Faculty Club, Sloan Bldg., M.I.T.	1
Bridgeport	Plant Visitation	Chairman, Jerome A. Supple	Bridgeport, Rolling Mills Company	Remington Arms Co.	20
Chicago	Top Management's Role in Planning	R. F. Dick	V.P., Illinois Tool Works	Furniture Club of America	27
	Learning Time—It's Application for Single and Group Operations	C. Handler	Engineer, A. T. Kearney & Co.	Furniture Club of America	3
	Why We Organized An Operations Research Section Project	Warren Alberts	Chief Industrial Engineer, United Air Lines	Hardings Presidential Grill	6
	The Effect of the Payment of Average Hourly Earnings on Non-Incentive Jobs	Roundtable discussion		Abbot Hall, Northwestern U.	5
Clearing	The New Management Outlook	C. H. Percy	President, Bell & Howell Co.	Industrial Engineering Club	21
Cleveland	Management Looks Ahead to Tomorrow's Policies and Problems	Noble Hall	Regional General Manager, Rueben H. Donnelly Corp.	Lake Shore Country Club	5
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Dayton	Planning for Profitability	Edward C. Ebeling, Chairman			27
Detroit	Applications of Operations Research	M. E. Salveson	Manager, Business Research, General Electric, New York	Engineering Society of Detroit, Rackham Educational Memorial Bldg.	26
Georgia	Students Night			Briarcliff Hotel	22
Greenville	Management Training	D. L. Bibby	Vice President, IBM	Elks Club	14
Hudson Valley	Manufacturing Controls—A New Look	H. Ford Dickie	Manager, Production Control Services, General Electric Co.	Hendrick Hudson Hotel	6
Indianapolis	Investments As They Apply To You	Don W. Goelzer	Manager, Trading Dept., City Securities Corp.	Marble Ball Room, Marott Hotel	8
Kansas City	Joint Meeting Personnel Management Assoc.	Kenneth M. Piper	Director of Human Relations, Motorola Inc.	President Hotel	22
Knoxville	What Universities Expect of Industry And Vice-Versa	N. W. Dougherty	Dean of Engineering College, University of Tennessee	Holston Hills Country Club	13
Lancaster	Work Simpler—Not Harder	Allan Mogensen		Hotel Brunswick	20
Los Angeles	Production Controls	George Logan	Group Engineer, Research and Development Labs, Rheem Mfg. Co.		15
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CHAPTER	SUBJECT	SPEAKER	TITLE	PLACE	DATE
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New York	Training Techniques	Jan Verschoor		Rainbow Grill, Rockefeller Plaza	15
Northeastern Penn.	The Industrial Engineers Place on the Industrial Team	B. W. Neibel	Professor, Penn State U.	Hotel Jermyn	5
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Providence	Cost Reduction—1956 Model	William K. Hodson	V.P., Methods Engineering Council	Brown Refractory	1
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		J. S. Gaynor	Works Engineer, Carborundum Co.		
		R. H. Graves	U. S. Metals Refining Co.		
Sacramento	Sales Management	Sully Griffin	Asst. General Sales Manager, Shell Oil Co.	Capitol Inn	6
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Western North Carolina	Your Horn of Plenty	Wyatte F. DeLoache	Southern Manager, E. I. du Pont	George Vanderbilt Hotel	14
Wilmington	Electronics for Small Business —Fact or Fancy	A. N. Seares	V.P., Remington Rand Div. of Sperry Rand Corp.	Lord De La Warr Hotel	13
Worcester	Management's View of the Function of Organized Labor in our Economy	Archibald Williams	V.P., American Hardware Co.		

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